A Concept Analysis of Competency in Nursing

Tammi-Louise Potter

Southern Illinois University Edwardsville

20041118031

Arleen Fearing, RN, EDD

Cynthia Schmidt Ph.D., R.N.

Morte Ref., RN, Pho

REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

Public reporting burden for this collection of inf gathering and maintaining the data needed, and collection of information, including suggestions Davis Highway, Suite 1204, Arlington, VA 222				
1. AGENCY USE ONLY (Leave blan		3. REPORT TYPE AND		
	15.Nov.04	l l	MAJOR REPORT	
4. TITLE AND SUBTITLE				DING NUMBERS
A CONCEPT ANALYSIS OF C	OMPETENCY IN NURSING			
6. AUTHOR(S)				
MAJ POTTER TAMMI L				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) SOUTHERN ILLINOIS UNIVERSITY EDWARDSVILLE				ORMING ORGANIZATION ORT NUMBER
				CI04-898
9. SPONSORING/MONITORING AC	GENCY NAME(S) AND ADDRESS(F	<u>S</u>)	10. SPO	NSORING/MONITORING
THE DEPARTMENT OF THE				NCY REPORT NUMBER
AFIT/CIA, BLDG 125		ĺ		
2950 P STREET				,
WPAFB OH 45433				
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION AVAILABILITY	STATEMENT		12b. DIS	TRIBUTION CODE
Unlimited distribution	,	1		THE THE COL
In Accordance With AFI 35-205	AFIT Sup 1	1		
. •				
13. ABSTRACT (Maximum 200 wo	irds)			
·			•	
				I STATEMENT A
				Public Release
		Distr	ibutior	n Unlimited
			<u>.</u>	
14. SUBJECT TERMS				15. NUMBER OF PAGES 53
		•		16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFIC OF ABSTRACT	CATION	20. LIMITATION OF ABSTRACT

THE VIEWS EXPRESSED IN THIS ARTICLE ARE THOSE OF THE AUTHOR AND DO NOT REFLECT THE OFFICIAL POLICY OR POSITION OF THE UNITED STATES AIR FORCE, DEPARTMENT OF DEFENSE, OR THE U.S. GOVERNMENT.

Introduction

A small hospital operates with an eight-bed multi-service intensive care unit (ICU) staffed with an entirely baccalaureate-prepared registered nurse (RN) staff. The average daily census most months is 1.5 patients. On a rare occasion the census swells to six patients, but on many days there are no patients at all. Even when patients are present they are frequently not critically ill, but are merely there for "closer observation." The ICU nurses float to the nearby ward or perform computer-based training exercises during the slow periods, which are frequent. The nurse manager and staff development officer (SDO) are concerned about the impact of a dwindling patient population on the competency of the nurses to perform certain low-volume, high-risk procedures, such as invasive hemodynamic monitoring via the Swan-Ganz pulmonary artery (PA) catheter. The last patient requiring a PA catheter was over 6 months ago. Hospital administrators are reluctant to reduce such services, fearing loss of revenue and loss of status.

The nurse manager and SDO consider options; they employ mannequin simulators, self-learning packages, and computer-based simulations. They even enter an agreement with a local Veterans Administration (VA) hospital to utilize their nurses in the VA ICUs, where the patients are more critically ill. This agreement generates problems of its own; the shifts of the nurses working at the VA must be covered, and the VA itself goes through a period where invasive monitoring is rarely used. It is common for a nurse to perform a 2-week tour at the VA and not observe a Swan-Ganz catheter at all. In addition, the VA nurses are anxious to maintain their own competency and are reluctant to give up complex patients to a "visitor."

The small hospital continues to search for solutions, since each day that passes without "true ICU" patients reduces the nurses' skills incrementally, and the risk for errors increases.

Physician confidence in the competency of the nurses decreases, and they become less likely to

admit critically ill patients that need intensive services. Rumors begin to circulate that the ICU nurses are incompetent, even though it is not overall competence but skill competency that is the issue. The physicians are not only thwarting the nurse manager and SDO's efforts to maintain competency, but they unwittingly jeopardize their own ability to manage high-risk patients. Thus, competency plummets universally, and the decline becomes a vicious circle.

Purpose

Issues such as those described above generate discussion of the term *competency*. The purpose of this analysis is first to attempt to define the term *competency* and to distinguish it from competence. From there it examines the origins, development, and measurement of competency in order to identify critical defining attributes, antecedents, and consequences. The ultimate goal is to clarify the elements of competency in nursing and to recognize the importance of maintaining it in the face of changing technologies and systems. At the very heart of the matter, competency is an inseparable component of patient safety, the difference between helping and harming. Competency is of importance to nursing not only to deter lawsuits and silence critics, but because nursing is a profession rooted in science, and it is important to approach nursing processes and functions-scientifically.

Significance

It is tempting to leave the discussion of the importance of competency to nursing right there, with an emotional appeal to the heart of the nurse to protect his/her patients from harm and to uphold the honor of the nursing profession. There are, however, some very strong motivations for nurses to place priority on competency and to ensure their colleagues do the same. These driving forces include the powers that confer accreditation and even licensure itself.

4

The Joint Commission for Accreditation of Healthcare Organizations (JCAHO) first introduced standards for performance appraisal in the 1970s, in order to evaluate professional and paraprofessional skills, and then began using the term *competency* in 1991 (Astarita, Materna, & Blevins, 1998). In 1994, they mandated competency documentation for all professional, paraprofessional, and support staff. Burke (2000) affirmed that to meet/exceed JCAHO expectations, organizations must continually measure, assess, and document competency. More than just a loosely connected series of tasks, "JCAHO expects healthcare organizations to have a competency assessment *system*...(that) implies standardization, consistency, and unification" (LaDuke, 2001, p. 222).

The Institute of Medicine's (IOM) landmark report, *To Err is Human* (1999), didn't define competency outright but included in recommendation 7.2 (*Performance standards and expectations for health professionals should focus greater attention on patient safety*), that "Health professional licensing bodies should...implement periodic reexaminations and relicensing of doctors, nurses, and other key providers, based on competence and knowledge of safety practices" (p. 116). They cited the 1995 Pew Health Professions Commissions report, which described competence as "not only the basic and specialized knowledge and skills, but also other skills such as 'capacity to admit errors'." (p. 124).

The nurse who regards competency lightly, and who is judged an unsafe practitioner, risks the sacrifice of years of education, professional esteem, and even basic livelihood. This nurse is a danger to patients, colleagues, and the healthcare facility. This nurse is in essence a ticking time bomb. When a professional cannot admit a known error or does not recognize that an error has even been made, a chain of events unfolds in which no one touched by that nurse emerges unscathed. This is the significance of competency in clinical practice.

Method of Analysis

This concept analysis employs the Walker and Avant (1995) method of analysis. The online Cumulative Index to Nursing and Allied Health Literature and MEDLINE indexes were used, and nursing, medical, educational, and psychological literature was searched for journal sources. Generally, journal articles were limited to those between the years 1996 to 2004, but certain classical sources and the empirical tool were garnered from text literature going as far back as the 1970s. An Internet search was performed for legal and governmental sources, such as information from state nursing boards and the IOM. The most current reports were sought.

Identification of All Uses of the Concept

Definition

Dictionary Definition

Competency is a conundrum. It is both a goal of performance and part of the nature of the individual. It is both a destination and the conduit to get there. The challenge is to define it and channel its significance for practice. Astarita, Materna, and Blevins (1998), stated that the term competency itself first began to appear in professional literature during the 1960s, as the public pushed for evidence of educational accountability. The American Heritage Dictionary (Anderson, Fortson, Kleinedler, & Schonthal, Eds., 2001) equates competency with competence and gives a single definition for both as follows: "Competence also competency (n.) 1. The state or quality of being competent. 2. A specific range of skill, knowledge, or ability" (p. 181). An Internet dictionary defines competency as "the quality of being adequately or well qualified physically and intellectually" (http://www.hyperdictionary.com/dictionary/competency). There is a lack of nationwide consensus about the difference between the terms. McMullan et al. (2000) described the ambiguous use of the terms competence and competency in the literature,

6

and LaDuke (2001) maintained that when organizations are left to create their own definitions, confusion over regulatory issues results: "Competency has crept into the healthcare lexicon in a way that may not be easily understood, in or outside of the industry" (p. 221).

Distinguished from Competence

Describing a nurse as incompetent is starkly different from saying a nurse lacks competency in a given area, yet the terms are still freely transposed. McConnell (2001) attempted to reconcile the competence vs. competency dilemma: "Competence refers to an individual's capacity to perform job responsibilities. Competency focuses on an individual's actual performance in a particular situation" (p. 14). McMullan et al. (2003) claimed competency arises from within, that competence is related to the action but competency to the individual; thus, underlying character qualities generate successful performance.

Ramritu and Barnard (2001) cited the 1990 Australasian Nursing Registering Authorities Conference, which defined competency as "an attribute of a person which results in effective and/or superior performance" (p. 48). At the same conference, competence was defined as covering "the whole range of competencies applicable to the nurse, at a standard that is judged to be appropriate for the level of the nurse being assessed" (p. 48). To reinforce her own view, LaDuke (2001) referred to JCAHO's 2000 standards, which defined competence and competency the same way, as "a determination of an individual's capacity to perform up to defined expectations" (p. 221). With these varying definitions, organizations are left to use the term competency in different ways, and consultants who speak in broad, abstract concepts when the attendees are seeking concrete answers only promulgate the confusion.

Definitions in Nursing Literature

The term *competencies* seems to be an accepted generic term for a skills framework, but there are a variety of ways the term *competency* is defined in nursing literature. Some authors linked the concept to professionalism in nursing practice: Forker (1996) believed that nursing had the right to define its own terms simply by nature of its status as a profession. Bradshaw, a British educator, has written extensively on the concepts of *competence* and *competency*. Her (1997) work recognized the uncertainty and fragmentation involved in attempts to differentiate the two. In 1998 she wrote, "This issue of nursing competency rests in the greater issue of what constitutes a competent nurse and how she is prepared for the professional role" (p. 103). Winchcombe (2000) described a competency-based standard as "a level of achievement required for a specific domain of nursing practice" (p. 229), while Jones, Cason, and Mancini (2002) kept a simple perspective: "Competence for entry into the workforce is almost uniformly defined in the United States as passing the licensure examination" (p. 22).

Other authors related competency to practical aspects of nursing practice. Brunt's (2002) view was that "Competency focuses on learning outcomes...ability to perform in a given context and capacity to transfer knowledge and skills to new tasks and situations" (p. 314), while Burke (2000) called competency "the knowledge and skill necessary to do one's job" (p. 22). Blevins (2001) defined competency as "having knowledge, values, and skills that lead to best practice and optimal job performance" (p. 114). Parsons and Capka (1997) linked competency to performance, declaring competency to be "an individual's successful performance of identified key job functions, core skills, and behaviors specific to the responsibilities of the position and assigned duties" (p. 1067). Coyle-Rogers (2003) applied the term to career mobility, implying that competencies grow and adapt with advances in skill level.

The dramatic and varying viewpoints revealed in these attempts to define the term competency in nursing complicate rather than simplify the process. Terms such as knowledge, performance, and skills seem simple and quantifiable, but when the effort is made to reconcile them to terms such as values, context, and optimal, the complexity escalates. One may ask, how can an individual's values be measured? Who determines the context of competency? What is optimal performance? Who (or what) is the yardstick against which competency can be measured? These questions lead to other questions and pose a serious challenge to those whose profession depends on offering an objective definition that can be universally applied.

Definition According to Organizational Position Statements

Several professional organizations have offered definitions of competency. An expert panel appointed by the American Nurses Association (ANA) in 1999 observed that there was no agreed-upon formal definition for competency/competence, citing the variety of literature definitions that are meaningful only in their particular context (Whittaker, Carson, & Smolenski, 2000). Following deliberation, the panel defined professional nursing competence as "behavior based on beliefs, attitudes, and knowledge matched to and in the context of a set of expected outcomes as defined by nursing scope of practice, policy, *Code for Nurses*, standards, guidelines, and benchmarks that assure safe performance of professional activities" (p. 11).

Wright et al. (2000) presented the National League for Nursing's (NLN) Leadership Competency Framework, a design that established curriculum content in which competencies of varying complexity distinguished basic from advanced levels of training. The National Council of State Boards of Nursing (NCSBN) defined competency as "the application of knowledge and the interpersonal, decision-making, and psychomotor skills expected for the nurse's practice role, within the context of public health, welfare, and safety" (Mustard, 2002, p. 37).

At the state level, Eichelberger and Hewlett (1999) offered the Mississippi Competency Model. The goal was cost-effective care and establishment of baseline competencies for nursing school graduates (all levels of preparation). Not surprisingly, they ran into difficulties achieving consensus. South Dakota and Colorado also constructed models with competency statements for licensed practical nurses (LPN), associate degree nurses (ADN), and baccalaureate graduates and stipulations about progression from one level to the next. Their efforts were some of the earliest evidence of states' voluntary incorporation of LPN and ADN students into higher education based on competency statements rather than validation testing (Eichelberger & Hewlett).

No matter how great the impact of the organization, whether at the local, state, or national level, all emphasize the behavioral, application, and safety aspects of competency. Legislative agencies readily recognize many common themes in the concept, but they experience difficulty in determining both what constitutes achievement and how it is maintained.

Definition According to Legal Standards

Competency is a challenge to define legally. Legal definitions, when sought, primarily interpret competency in terms of its relationship to jurisprudence. One Internet legal definition refers to competency as, "The mental ability to understand the general effect of a transaction or document (or) the legal fitness or ability of a witness to be heard on the trial of a cause" (http://www.lectlaw.com/def/c078.htm).

Bradshaw (2000) traced competency's legal roots in the United Kingdom back to the 1919 Nurses' Registration Act, which made it a legal requirement for nurse training to be standardized and systematized. This was documented in the Syllabus of Lectures and Demonstrations for Education and Training in General Nursing that was issued in 1923 and led to the preliminary and final examinations for general nurses. Until 1977 the legal system relied on this explicit, standardized syllabus for a standard of competency.

In the United States (U.S.), Kentucky state law defines *competency* as "the application of knowledge and skills in the critical thinking, effective communication, interventions, and caring behaviors consistent with the nurse's practice role within the context of the public's health, safety and welfare" (McGuire & Weisenbeck, 2001, p. 34).

It is common to see competency defined in relation to what it is *not*, as in Haddad's (1998) article. Haddad stated that incompetence is a moral failing because it puts individuals (i.e., patients) at risk, and she suggests three reasons why nurses tolerate incompetence among nurse colleagues—peer loyalty, beneficence, and manipulation by the colleague. She declared, "If competence lies at the heart of professionalism, then it is the responsibility of all of us to maintain standards even when it appears to run counter to cherished values like loyalty and beneficence" (p. 22). Bradshaw (1998) cited the case of a Scottish nurse who made an error in the insertion of a syringe into a syringe pump and caused a fentanyl overdose for a 34-year-old woman, post-cholecystectomy. Rather than the nurse receiving blame, the hospital administration was faulted for not providing ongoing safety training on the syringe pumps and ensuring that nursing staff were educated in potential overdose.

The 1995 Pew Report, reviewed by Exstrom (2001), laid accountability for competency on the states, believing they "should standardize entry-to-practice requirements and limit them to competence assessments for health professionals...(and) should base their practice acts on demonstrated initial and continued competence" (p. 120). Exstrom also placed heavy responsibility of the regulatory boards to establish ongoing competency requirements and a standardized disciplinary process.

The dramatic span of even legal attempts to define competency reveal the profound disquiet associated with the term. To try to define what it is appears presumptuous; to define what it is not, evasive. The challenge lies in finding a measurable middle ground.

Other Synonyms

A number of other terms are also used synonymously. Astarita, Materna, and Blevins (1998) asserted that although competence is often used as a synonym for competency in the literature, it should not be, for "having the capacity to perform effectively is not the same thing as actually performing effectively..." (p. 67). They identified common synonyms for competency, such as: "Capability, capacity, ability, efficiency, and proficiency" (p. 66), all of which have some similarities and differences. McMullan et al. (2000) also found the terms capability and performance used interchangeably with competency, though these focus primarily on technical as opposed to interpersonal attributes of the concept.

Proposed Definition

Based on the above definitions, competency is defined, for the purpose of this analysis, as: The quality of sufficiency for a role that unites ethical principle, personal motivation, self-awareness, effectual training, grounded experience, and ongoing practice. Competency may be applied to a specific skill framework or a broad scope of practice.

Competency Theories

Nursing

According to DeSilets (1998), it was Florence Nightingale who originally wrote: "Nursing is, above all, a progressive calling. Year by year nurses have to learn new and improved methods, as medicine and surgery and hygiene improve...(and) are called upon to do more and better than they have done" (p. 205). Bradshaw (2000) traced early competency

training back to a nursing textbook by Florence Lees (1874), a nurse who cared for the wounded during the Franco-Prussian War and described practical nursing knowledge, such as bandaging, enemas, bedsore prevention, etc. This graduated learning was a prequel to Benner's (2001) levels of practice, from elementary to advanced skills and basic tasks to more complex, and ensuring junior nurses mastered these early nursing competencies was the ward sister's (nurse manager) responsibility. In addition, Bradshaw noted, nursing "etiquette" was emphasized; moral traditions, the "spirit" of nursing, professional courtesy, the patient's well-being, and goodwill were all early characteristics of the competent nurse.

Jones, Cason, and Mancini (2002) alluded to Peplau's (1984) work, stating that regulation of nursing practice belongs to the nursing profession, and that nursing self-regulation dates back to Nightingale. Bradshaw (1998) emphasized the need for the nurse to know her own standard for safe practice and to recognize her own limitations, while Brunt (2002) discussed U.S. competency models, which initially evolved as teacher training techniques. By the late 1970s over 3,000 citations addressed competence or competency-based education.

The nursing theorists were united in their opinion of the significance of competency attainment, and of the ensuing consequences should practitioners fail to sustain the standard. They called for nursing as a profession to strive to make competency a priority, both behind the walls of nursing schools and at the bedsides of the patients who were the ultimate beneficiaries. *Psychology*

Manley and Garbett (2000) traced the concept of *competency* back to its origin in U.S. psychology. A proponent of personal accountability, McClelland (1973) was considered the founding father of the competency movement and was among the earliest to use the terms *competency* and *competencies*. His early efforts to define competency began with assessment of

the practices of effective performers. With his colleague Boyatzis (1982), McClelland focused on the characteristics of the performer him/herself that differentiated the poor or average from the superior. Thus, those who demonstrated competency were considered a cut above average. *Education*

Competency also has roots in educational theory, such as Kolb's (1976) Experiential Learning Theory (Coyle-Rogers, 2003). Like other learning experiences, competency operates on the assumption that achievement does not occur in isolation, but through the relationship between the individual and his/her environment, and it translates beyond the classroom and into life and work experiences. Kolb described four types of competencies: Accommodative (intuitive reasoning, dealing with people), assimilative (inductive reasoning, designing experiments, analyzing quantitative data), convergent (problem solving, practical tasks, decision-making), and divergent (people-oriented tasks, sensitivity to values).

Parsons and Capka (1997) described another educational theory related to competency, based on Robert L. Katz' (1995) conceptual framework, which suggested competency be evaluated based on three types of basic skills—technical, human, and conceptual. According to Katz, these skills can develop over time—one needn't be born with them.

Uses of the Concept

It is indeed a challenge to compartmentalize competency, as the plethora of available nursing literature demonstrates. Blevins (2001) posed that while the attainment of a nursing license is commendable (a sign of basic achievement), competency is a characteristic in constant flux and dependent on education and experience. This transcends the traditional U.S. view of baseline competency as licensure alone (Jones, Cason, & Mancini, 2002). Blevins agreed that staff competency is a priority in order to promote a positive experience for both nurse and

patient. She referenced Yoder-Wise (1996), who stressed the importance of self-assessment as a means to identify needed skills, and agreed that competency through ongoing inservice training must incorporate new equipment, procedures, or types of patients. All authors agreed it is wise to integrate various teaching methods and to evaluate competency across all three learning domains—cognitive, affective, and psychomotor.

In addition to the learning domains, there is a second triad of competency-related training variables: Parsons and Capka (1997) described Dr. Dorothy delBueno's competency model, which proposed a framework for competency comprising three primary dimensions—technical, interpersonal, and critical thinking skills. "The first phase reflected the ability of the individual to perform the skill or achieve the desired outcome. The second phase represented consistent performance and often was much more difficult to define and measure" (p. 1066).

Competency in Nursing School Curricula

According to Astarita, Materna, and Blevins (1998), it was in the 1970s that Dr. Dorothy delBueno introduced her competency-based curriculum for schools of nursing. DeOnna (2002) described competency-based curriculum development as a means to "define good performance and then facilitate it" (p. 6). Tanner's (2001) competency-based educational model likewise focused on performance. Tanner emphasized a flexible, individualized process in which the outcomes (what the student is expected to know and do) were measured.

Lenburg's (1999) premise on the competency-based approach to training was that it "...requires...educators...(to) analyze relevant current environment and needs, from which they determine content and competencies to be achieved in the instructional program" (p. 3). A prominent figure in competency-based education, she developed the Competency Outcomes and Performance Assessment (COPA) Model, built around eight core practice competencies, based

on her work with the New York Regents College Nursing Program (1973-1991). These competencies can be applied to any nursing specialty. Lenburg described competency-based objectives as learner-oriented; clear and concise; specific; and consistent with standards, practice, and real-world performance expectations.

Redman, Lenburg, and Hinton Walker (1999) found competency-based training effective for both didactic and self-learning methods, which offered evidence corroborating competency-based education's value in producing competent practitioners. They applied Lenburg's COPA Model and its outcome-oriented, competency-based curriculum to their university's nursing program in order to evaluate performance of knowledge/skill application at psychomotor, cognitive, and affective levels.

Competency in Nursing Practice

Since an individual's level of competency is expected to progress over time and experience, it is possible to identify many classifications of competencies. Watkins (2000) identified six subsets, while the NLN's Council of ADN Competencies Task Force (Coxwell & Gillerman, Eds., 2000) split core competencies into eight categories. Brunt (2002) simply portrayed the *breadth* of competencies: "Competencies are broad statements describing an aspect of practice that must be developed and demonstrated...(they) should reflect broad, measurable aspects of practice and should be clear and understandable to the persons demonstrating and validating the competencies" (p. 314).

Eichelberger and Hewlett (1999) focused on core competencies, basic statements that may be used to concisely illustrate nursing functions—a means to illustrate the "five rights."

The premise of their Mississippi Competency Model was that "Core knowledge, the essence of nursing, does not change with the setting or role but...serves as the foundation for each role and

the care provided, regardless of educational preparation" (p. 206). Harper (2002) focused on competency-based orientation, in which competencies themselves were role and unit-specific skills, aimed at preparing independent, competent practitioners.

Manley and Garbett (2000) likewise concentrated on levels of competency, beginning with threshold competencies (orientation), which served as the groundwork for competencies needed for superior performance. Parsons and Capka (1997) classified competencies as either "hard" or "soft." Hard skills were specific tasks and procedures related to the individual's job, while soft skills are innate aspects of the individual's personality style.

Competency in Nursing Specialties

Each specialty boasts its own competency-based requirements, which include practical aspects and personal qualities. Astarita, Materna, and Blevins (1998) highlighted the Community Health Accreditation Program's requirement for competency-based training. In home health, simulation was formerly the primary training method, but now direct observation is growing in feasibility. It requires planning and time. Forker's (1996) community-focused competencies emphasized critical thinking, relational, and management skills.

Dugger (1997) identified intravenous nursing competency elements, including accountability, communication, collaboration, autonomy, essential intravenous knowledge/skills, measurable clinical behaviors, and recognition of areas in need of improvement. Jenkins (2002) wrote, "The development of competency standards in genetics is...(the) first step in redesigning expectations of nurses in the clinical setting" (p. 488). Leonard and Plotnikoff (2000) explored cultural competency, "providing care to patients and their families that is compatible with their values and the traditions of their faiths" (p. 51) and advised self-awareness. Morton (2002) wrote extensively on required competencies for dealing with patient violence, Tornabeni (2001)

listed six leadership core competencies for managers, and Redman, Lenburg, and Hinton Walker (1999) outlined competencies for nursing research based on the nurse's level of practice. These examples merely scratch the surface of the range of nursing specialties that own "competencies" and demonstrate the universality of the concept.

Determinants/Criteria

So what determines competency? How does one know if an individual whose resume looks good on paper actually possesses the necessary qualities? Many authors again place responsibility on the individual. Bradshaw (1997) posed, "How do I know with confidence that I have the necessary and adequate knowledge and skill to perform my duties and responsibilities" (p. 347)? She believed nursing education placed responsibility on the individual nurse to define/assess his/her own standard of competency; this generated three major questions: "What is the standard of competency the nurse needs to attain? How is the nurse prepared to reach this standard? What measures are used to evaluate attainment?" (p. 350). The NCSBN is in the process of developing a Continuing Competency Accountability Profile, with which the nurse could perform a practice self-assessment, identify learning needs, plan a strategy to meet those needs, implement them, and evaluate the effectiveness of the strategy (Exstrom, 2001).

Burke (2000) proposed: "If data indicate a competency issue for an individual, group, or the entire staff, plan education and a return demonstration of the skill for those who need it" (p. 25). Dolan (2003) pondered whether competency varied by scenario: "A nurse may have achieved the required skill level, i.e. competency, but may not be able to achieve this level in all situations" (p. 134). Manley and Garbett (2000) considered the work of several other researchers before proposing that competence is the outcome of the performance, rather than the process itself. This approach permits application to unexpected situations and to the multifaceted,

holistic, and shifting nature of clinical practice. They cautioned against building competencies based on observation of a skill, which may lead to statements that reflect the action itself, not the ideal, and posed the question: Is competency innate or something that can be legislated?

Resources from which to identify determinants of competency may include "Professional nursing statements; organizational, nursing, or unit policies; clinical pathways; clinical patient guidelines; equipment manuals; independent study modules; required reading; or formal course work" (Rusche, Besuner, Partusch, & Berning, 2001, p. 235). Exstrom (2001) identified methods employers might use to establish competency criteria, such as, "...peer review, competency examinations, continuing education, periodic refresher courses, client reviews, and minimum practice requirements" (p. 120). For instance, in Nebraska, nurses must work 500 hours in 5 years and complete 20 hours of continuing education every 2 years.

Levels of Competency

Brunt (2002), noted that Benner and others have done significant volumes of work to differentiate levels of performance. According to the 2001 edition of Benner's landmark work, From Novice to Expert, a competent nurse meets expectations of the third stage (1-Novice, 2-Advanced Beginner, 3-Competent, 4- Proficient, 5-Expert). Benner states:

Competence...develops when the nurse begins to see his or her actions in terms of long-range goals or plans of which he or she is consciously aware...a plan establishes a perspective, and the plan is based on considerable conscious, abstract, analytic contemplation of the problem (p. 26).

Benner postulates that this stage largely reflects a nurse who has been in the same or a similar job/situation for 2-3 years, a hypothesis echoed by Pettno (1998), in her discussion of clinical ladders. Benner points out that a competent nurse may lack the speed and versatility of nurses at

higher levels but does have feelings of confidence regarding her skills and her ability to respond to and handle clinical contingencies.

Many others have attempted to classify levels of nurse competency. Dugger (1997) delineated three levels of intravenous nurse competency: Competent (knows the basics and can solve urgent or uncomplicated problems), proficient (draws upon previous experience and serves as a resource for others) and expert (flexible and a role model, able to rapidly grasp and solve problems, and someone who has earned the trust and respect of colleagues through expertise).

Mustard (2002) reflected on the need to personalize the type of inservice instruction based on the mix of nursing staff present—novice, advanced beginner, and experienced, and Ramritu and Barnard (2001) speculated, based on research, whether there should be a totally separate set of competencies for entry or beginning-level practitioners. Thompson (2003) led a Delphi study to determine which competencies needed in a mobilized environment should be expected of which level of nurse, classified by three practice levels, novice, intermediate, and expert.

Measurement

With authors defining the term *competency* itself differently it is not surprising that there is great disparity among measurement strategies. Mustard (2002) expressed disbelief about the feasibility of measurement: "Beginning at the student clinical performance level, a continuing crisis exists in defining nursing competence. Does the nurse, peer, nurse manager, nurse educator, or patient know if the nurse is competent?" (p. 36). Measurement is obviously a challenge and can be complex. Benner (2001) identified a series of 31 competencies (based on actual practice situations), divided into seven domains. The competencies are subdivided into exemplars, which may apply to more than one competency, thus, covering all interpretations. For example, in the domain *Teaching-Coaching Function*, one competency is Timing: Capturing

a Patient's Readiness to Learn. For this competency, an exemplar is using "discretion...in the timing of an intervention. Assessing where a patient is, how open he is to information, deciding when to go ahead even when the patient does not appear ready..." (p. 79).

The history of "annual" competency measurement appears to focus more on the attempt to measure capability rather than on the nurse's actual clinical practice (Bradley & Huseman, 2003). Redman, Lenburg, and Hinton Walker (1999) likewise emphasized moving away from long task lists based on job descriptions to more global statements, based on expert consensus. Bradley and Huseman recommended measuring actual performance: "Educators are walking away from the reams of check-off sheets ...moving staff up the competency ladder from the lower rungs of knowledge onto the upper rungs of application" (p. 175).

Bradshaw (1997) suggested continuous competency assessment "show communication, interpersonal, management, critical, problem solving and analytical skills" (p. 349). She described competency assessment as objective, "formative rather than summative: relying on continuing assessment rather than final examination" (p. 351). Authors continue to label "objective" competency measurements a necessity, even while admitting such measurement is easier said than done. In her later (1998) work, Bradshaw quoted an opinion by Dimond (1994) that "Without individual certification for separate tasks it will not be easy for the practitioner or others to determine whether the nurse has the skill, competence and knowledge" (p. 105). Dolan (2003) contended that the strategy for assessing competency begins in university nursing programs. Burke (2000) recommended using performance appraisal for competency assessment.

LaDuke (2001) suggested diverse approaches to assessment of high-volume/low risk skills and spotlighted a valuable competency assessment resource, the Nursing Interventions Classification (NIC). The NIC, which has been reviewed and recognized by 39 nursing specialty

organizations, lists over 500 research-validated, ready-to-use competencies that cover all areas of nursing practice and specialization. LaDuke advocated looking beyond only easy-to-measure manual skills, pointing out that it is a temptation for staff development to select competencies based on ease of measurement rather than patient care value.

Other models of competency measurement include Rudzik's (1999) model, which included self-assessment and orientation modules, skill checklists, self-study modules, written examinations, and program evaluations. Rusche, Besuner, Partusch, and Berning (2001) offered another approach involving multiple measurement strategies, "... observation of daily work, competency criterion tools, clinical simulations, return demonstrations, peer review, and concurrent review of patient management through patient care rounds" (p. 237).

McConnell (2001) indicated that because competence and competency mean different things, their means of assessment should also be different. Competence assessment measures the caregiver's potential knowledge and skills, while competency assessment authenticates the same caregiver's ability to actually perform and apply knowledge and to integrate that knowledge with skills. Competency assessment also goes a step further and evaluates the caregiver's ability to apply standards of care and established policies and procedures to a given situation.

The obvious diversity of proposed measurement strategies illustrates the challenge for nursing educators and supervisors. There is no "universal" tool with which to evaluate a nurse's level of competency; thus, the nurse educator or supervisor must select the tool best suited to his/her practice area in order to determine competency of her students/staff. Careful consideration is paramount, as this decision will impact his/her ability to justify and defend acceptable standards of practice for the specific clinical area, if and when a challenge arises.

Advanced-Practice Measurement

Information on competency measurement in advanced practice is less plentiful and varies by specialty. Dugger's (1997) recommendations for advanced intravenous competencies included evidence of research contributions, pain management, infection control, and cost efficiency. She recommended using checklists to evaluate intravenous competency but also advocated documentation of continuing education and advanced certification. Dunn et al. (2000) analyzed 57 Australian hospitals in order to develop competency standards for critical care nurse specialists and to differentiate between entry-level and advanced practice standards. They recommended 20 competency standards divided among six domains, subdivided the competency standards into components, and illustrated them with specific examples that can be cited as acceptable performance standards for that particular competency.

If competency, like so many other nursing skills, is a process, it may be possible to evaluate that process objectively. Compare competency to a chain of links (antecedents, critical attributes, and consequences); evaluation involves testing each link to determine if weaknesses exist, in order to determine the feasibility of maintaining competency in a given procedure or skill. The quality/risk management tool known as Failure Mode Effect Analysis (FMEA, Stamatis, 1995) may be useful for such an evaluation. In FMEA, a process is selected and a flow chart created that summarizes every step; the goal is to objectively identify problems with a process before they occur, which prevents negative outcomes and strengthens the system. Each step is plotted on a matrix, and a hazard analysis (HA) is performed. The HA identifies where errors are most likely to occur and how catastrophic each may be. It is possible to identify where problems are most likely to occur with competency issues, how catastrophic they could be, and whether continuing a service is worth the risk. Using an evidence-based approach to

competency-related reduction in services emphasizes professional objectivity and, thus, engenders a more persuasive argument.

Professional Implications

Orientation/In-service Education

All of these varying perspectives have implications for nursing professionals, from orientation to their very first assignment. Alspach (1995) considered the "acquisition of clinical competency to perform one's assigned responsibilities to be within the scope of the orientation program rather than a part of the in-service program" (p. 8). Alspach claimed that nurses on orientation should not be considered to have completed it until they were able to demonstrate an initial level of competency in their job.

Competency-based orientation is also a requirement for accreditation. According to Burke (2000), JCAHO "requires all full-time, part-time or per diem, volunteer, and agency employees be provided with an effective, systematic approach to orientation; continuing education based on identified need; and a mechanism for competency assessment and validation" (p. 21). Orientation, said Burke, should progress systematically and conclude when the individual is competent to perform in the specified role. Harper (2002) appended a direction for orientation: "Competency-based orientation focuses on the learner's ability to perform his/her role as evidenced by the goal of a safe, independent clinical practitioner" (p. 198). Orientation is not strictly a function of staff development—it is key for nursing leaders to be involved during all stages, as underscored by Rudzik (1999): "Ensuring competency throughout the continuum of care is a simpler task when the nursing leadership staff is included in planning and developing a competency-based orientation and uses defined criteria in recruiting and hiring staff" (p. 72).

Rusche, Besuner, Partusch, and Berning (2001) proposed a definition for competency-based orientation, "a physical, interpersonal, or cognitive process that evaluates a new employee's ability to demonstrate specific procedures, activities, and/or behaviors necessary to deliver care for a designated client population" (p. 234).

State Professional Regulatory Boards

The state board is part of a partnership of five entities involved in assuring nurse competency, along with the individual nurse, nurse employers, nurse educators, and the nursing profession (Exstrom, 2001). The individual assumes accountability for his/her own practice, takes action regarding professional development based on the needs he/she identifies, practices within legal and ethical obligations, limits and/or accommodates practice as needed, and assists with peer review. The employer determines whether nurses are competent to fulfill their assigned roles and serves as mentor, counsel, disciplinarian, and role model. The educator develops competency through outcome-based curriculum, continuous evaluation, and role modeling. The profession promotes nursing practice growth, sets standards for excellence, and offers opportunities for professional development. Finally, the state boards: "Identify, promulgate, and communicate regulations related to nursing practice...by adopting and endorsing standards of nursing organizations, issuing advisory opinions, establishing rules and regulations, and by enforcing statues and laws" (p. 118). The board establishes minimum standards of competency and promotes ongoing competence. Exstrom stated:

Boards...are involved with competency of nurses at four strategic points in time...initial entry into the practice role...continuing authority to practice at the time of license renewal...at reentry to practice after an absence...(and) after disciplinary action (p. 121).

State of California Board of Nursing attempted to reinforce the nurse's individual responsibility toward maintaining competency, in its policy NPR-B-21 (1998):

It is the RN's responsibility to determine whether she/he is clinically competent to perform the nursing care required on the new unit or with the new patient population...The competency standards to which the Board holds the RN accountable are specified in Title 16, Business and Professions Code, Nurse Practice Act...The regulations require (A) Assigning only those duties and responsibilities for which competency has been validated; (B) the RN who has demonstrated competency for the patient care unit is responsible for planning and implementing the patient care...(C) RNs who have not completed the competency validation for the unit cannot be assigned total responsibility for patient care including duties and responsibilities for planning and implementing patient care (http://www.rn.ca.gov/policies/policies.htm).

State boards in Kentucky, Oklahoma, and Texas have employed the NCSBN standards competency as a framework in their attention to staff nurse competency issues (Brunt 2002). Kentucky developed a model for determining initial and ongoing competency, Texas offered grants to conduct pilot programs studying competency issues, and Oklahoma used a profile to validate how standards of nursing competency were being met.

Professional Organizations

From the standpoint of various professional organizations, the "ANA (1999) identified continued competence as one of the core issues for 2000. There was a continued competency forum at the ANA 1999 House of Delegates and approximately one-half of the 77 education sessions at ANA's 2000 convention were

aimed at assisting nurses to maintain their continued competence" (Brunt, 2002, p. 319).

The ANA's Code of Ethics (2004) states:

"Maintenance of competence and ongoing professional growth involves the control of one's own conduct in a way that is primarily self-regarding. Competence affects one's self-respect, self-esteem, professional status, and the meaningfulness of work. In all nursing roles, evaluation of one's own performance, coupled with peer review, is a means by which nursing practice can be held to the highest standards" (Provision 5.2, *Professional growth and maintenance of competence*, 2004,

http://www.nursingworld.org/ethics/code/ethicscode150.htm.).

The repetitions of the term *self* bear witness to the profound association between competency and individual responsibility. Competency, according to the Code of Ethics, involves not just initial ability to work but continuous professional growth of knowledge and skill and requires lifelong learning. This learning involves continuing education, professional networking, self-learning, reading professional journals, certification, and advanced degrees.

Related Concepts

Competency is related to many other concepts. Mustard (2002) emphasized the need for hospitals, once they have defined competency, to develop other factors that ensure quality patient care. These concepts run the gamut from the intellectual to the emotional to the professional.

Competence (Intellectual Capacity)

One aspect of competence that is distinguishable from competency is the intellectual portion, as in "competent to sign a consent." Brennan (1997) acknowledged the difficulty in defining competence and described how this "ability to perform at a given level' could be applied to skills or mental competence, but the term is ambiguous and open to interpretation" (p. 478). She contended: "Incompetence is a legal term referring primarily to defects in intellectual

reasoning. However, the measures of competence that we use today and have used in the past are subjective in nature and change over time" (p. 479). As opposed to the educational view of competence, Brennan categorized it as one of three types of mental capacity—1) the ability to understand and communicate, 2) the ability to reason and deliberate, 3) a set of values as to what is good and bad that is stable over time. Linked to intellectual competence is the concept of *cognition*; Masson and Fain (1997) found that a written test to evaluate cognitive knowledge is the most common approach to competency evaluation.

Expertise

The nurse who has achieved the highest levels of competency is often considered an expert. As Benner (2001) illustrated, the expert nurse is one who no longer is reliant upon guidelines to link her understanding of the situation to necessary action. It has become intuitive. An example is the psychiatric nurse who can identify the psychotic patient based on past experience, not based on a checklist of behaviors. The nurse still uses guidelines as tools but is not dependent upon them.

Another example is Mustard's (2002) hospitalist, an advanced practice nurse with significant clinical experience, who "act(s) as a facilitator and peer with the inpatient hospital nurses in difficult nursing procedures and in-service education" (p. 39). The hospitalist is a vital resource for staff nurses but does not undertake a patient assignment him/herself, instead serving primarily as a consultant.

The Five C's

Because of the indefinite relationship between competency and competence, and because the relationship between the concept of caring and competence is well documented, caring and competency are also closely linked. Roach (1992, cited in Manley & Garbett) stated that nursing

exclusive to nursing. Aspects of caring can be embodied in five C's of which competence is one, the others being commitment, conscience, confidence, and compassion. Mustard (2002) alleged that the test of caring (commitment to the welfare of the patient and family) is action, that "The fourth sense of caring is known most often as competence in carrying out all the required procedures, personal and technical, with true concern for providing the proper care at the proper time and in the proper way" (p. 36). Mustard reinforced the relationship, citing ANA's (2001) Code of Ethics, which states the nurse will not practice carelessness or lack of attention to detail but display compassion, conscience, commitment, and competence. Competence is defined in the context of compassion as "the state of having the knowledge, judgment, skills, energy, experience, and motivation required to respond adequately to the demands of one's professional responsibilities" (quote from Roach, 1992, p. 61, cited in Manley & Garbett, p. 352).

A study by Zhang et al. (cited in Mustard, 2002), analyzed competency and professional practice among 50 experienced Chinese nurses and determined that interpersonal understanding is the most important characteristic that is a determinant of good nursing performance. Mustard spotlighted advantages of collaboration, such as the freedom to teach and coach other nurses as they learn to provide high quality and efficient nursing care, a means of reproducing caring and competency. Taylor (2000) agreed, "Principles of partnership are an important element...and are evident throughout the competency process" (p. 36).

Collaboration

Determination of Defining Attributes

Critical Attributes

In much the same way that competency and competence, because of their interchangeability, are difficult to separate from each other, so are their critical attributes. The characteristics of ethics, self-reflection, and judgment are especially challenging; it could be argued that the absence of one questions the intensity of the others.

Ethical Framework/Self-knowing:

As several of the authors have pointed out, the nurse him/herself bears heavy responsibility for being aware of limitations and practicing within them (or taking steps to develop professionally). Competencies must be linked to values (Manley & Garbett, 2000). The law ensures the nurse knows where the lines of demarcation are and what happens if the nurse crosses them, but as Ludwick (1999) pointed out, laws and rules generally uphold minimum practice standards in order to protect patients from harm, but do not hold professionals accountable to higher skill levels—those that foster quality. The nurse professional should not have to rely on ethics alone to evaluate competency, nor should the public or regulatory boards have to rely on individual accountability as a guarantee. Conversely, exterior rules (licensing laws, continuing education, or competency-based evaluations) should not be the only reliable assurance of competency. Competency is a complex phenomenon that includes elements of both. "To practice competently requires us to comply with external competency measures and to reflect ethically about competence" (Ludwick, p. 17). Ludwick quoted from Florence Nightingale's *Notes on Nursing*:

That the female head in charge of any building does not think that it is necessary to visit every hole and corner of it everyday. How can she expect those who are under her to be

more careful to maintain her house in a healthy condition that she who is in charge of it? (p. 17).

Ludwick argued it is unreasonable for us to expect outside agencies to do a better job than nursing itself in determining whether or not its practitioners are competent. She firmly stated that initial and ongoing self-knowledge is a vital step to assuring competency and identifies steps to enhance ethical thoughtfulness. The nurse's first step is to perform a self-assessment of her competencies and read his/her state's Nurse Practice Act and the ANA standards. The goal is to see whether his/her practice meets these guidelines. Secondly, Ludwick suggests becoming involved in policy-making groups that establish competency standards (whether professional, organizational, or legislative). Thirdly, the nurse should remain informed; new competencies are constantly emerging as technology grows and changes. Finally, the nurse should be proactive; when confronted with a new competency, he/she needs to evaluate ethical implications for practice (potential harms, new skills needed, training, etc.).

Hand in hand with an ethical framework is the concept of self-reflection, which implies recognition of personal strengths and weaknesses. It is a serious complication when a nurse who is aware that he/she is not competent to perform a particular skill (even though she may have completed a skills lab or done self-study) feels obligated to accept a dangerous assignment. If she chooses to take the risk and simply press forward with the care despite reservations, she takes a serious personal risk and also puts the patient at risk (LaDuke, 2001). Even if the care is given safely, unreported potential problems may resurface later, possibly dangerously. A nurse must possess the confidence to acknowledge if he/she is "in over his/her head" and to seek help. Such an admission should be a call to the employer to commend rather than censure the nurse.

Knowledge (Education)

The vast numbers of specialty areas in which nurses may achieve competency require equally vast amounts of specialty education—and an ongoing maintenance of that knowledge, once achieved. Dugger (1997) listed just a few of the areas required for the advanced intravenous nurse, such as anatomy and physiology, fluid and electrolyte balance, infection control, blood transfusion, and pain management techniques. She argued that safe, quality care with optimal outcomes will not occur unless the nurse is adequately prepared.

Judgment/Decision-making/Problem-solving

Closely connected to ethics and self-reflection are the characteristics of sound judgment and decision-making/problem-solving abilities. Dunn et al. (2000) acknowledged it is impossible to evaluate competency in the clinical area separate from the context in which clinical decisions are made. "An effective, comprehensive, reliable and valid measure of clinical competency must reflect the reality of a patient care situation, and incorporate assessment of the problem solving processes used by the clinician" (p. 339). The clinician is likewise the focus of the ANA Code of Ethics (Provision 4.2, *Accountability for nursing judgment and action*, 2004), which holds nurses accountable for their decisions and the actions they take in the course of their nursing practice, no matter what directives they receive from either a provider or the health care organization itself.

Successful Skill Performance

It may seem like stating the obvious, but successful performance of the selected skill is a critical attribute of competency, logic emphasized by students, tutors, and preceptors alike, according to Dolan (2003). Dunn et al. (2000) maintained that the relationship between affective and psychomotor clinical skills and problem solving really defines competency.

Validation

Documentation of successful skill performance requires validation. There are both subjective and objective aspects to competency validation (Brunt, 2002). Subjective competencies are conceptual, not based on concrete behaviors, which cannot be quantified, while objective competencies are obviously measurable and can be freely quantified. It is much easier to validate objective competencies. However, how does the individual performing the assessment guarantee objectivity, especially in the clinical realm? One way that has been suggested by Dolan (2003) is standardization of clinical placements. Jones, Cason, and Mancini (2002) weighed two different assessment approaches—a mandatory skills fair and bedside observation. Bedside observation would likely be superior because of its real world context, but cost and time constraints might be prohibitive.

Parsons and Capka (1997) suggested a process of skills recredentialing, combining simulation and observation, as more cost-effective. Jones, Cason, and Mancini evaluated a performance-based competency assessment program in Dallas and found that RNs had to demonstrate performance consistent with competency standards in a variety of areas (such as dysrhythmia interpretation, arterial blood sampling, defibrillation, chemotherapy, etc.) every 2 years. For each area, there were competency standards that included both knowledge and performance components, which were largely assessed via simulation. They attempted to identify the level of agreement between simulation and actual bedside observation for competency evaluation. Assessment of competence required nurses to complete a knowledge test before progressing to the performance portion, and competency was defined as a passing score on both portions.

LaDuke (2001) questioned the relevance of skills labs to clinical performance, because of their primary focus on psychomotor skills, versus the cognitive and affective aspects of competency. It is common for small hospitals to face the challenge of trying to maintain competency on certain high-risk, low-volume skills, and therefore LaDuke's sentiment, that "when complex, high-risk skills cannot be validated during actual patient care because of extreme rarity of opportunity, hard questions may have to be asked if an organization wishes to make safe, patient-centered decisions about continuing low-volume services" (p. 224), should be carefully considered in selection of services offered.

It is often challenge enough to maintain competency in one's primary work environment, much less when cross-training to another clinical setting. Masson and Fain (1997) addressed this quandary and stressed the importance of validating competencies when functioning in new areas. This validation actually authenticates the nurse's overall practice, no matter in which role the nurse is functioning at the time.

Antecedents

No less critical to the concept of competency than critical attributes (in many cases overlapping with them) are antecedents. Awareness/knowledge, experience, and frameworks of skill behaviors must be present in order to achieve competency.

Awareness/Educational Knowledge

Competency begins with the learning process. Dunn et al. (2000) cited work by Alspach` (1984): "It is the acquisition of a specialized body of knowledge and its application to clinical rather than exclusively classroom settings which defines competency in nursing care" (p. 339). Among the components of competency, first of all should come knowledge of the cognitive skill

and the mastery of the multitude of facets involved in nursing practice, then the performance skills that demonstrate the application of facts to the specific clinical situation.

Experience

Manley and Garbett (2000) and Winchcombe (2000) agreed years of experience influence skill acquisition, though length of experience itself it not a guarantee of competency or expertise. Expertise does require exposure, since the practitioner has opportunities to respond to a variety of patient situations and enhance future practice, but determining the exact length of experience required is impossible. Manley and Garbett also suggested that energy and motivation are antecedents to competency—they certainly do play a part in the quality and quantity of experience gained.

Variety of experience is likewise important, proposed Morton (2002), who emphasized the need for diverse training opportunities, such as didactics, small group interaction, demonstrations and role-play, case study reviews, and simulated patient care situations. In Morton's world of high-risk patient violence intervention, the need to maintain competencies was felt even more urgently, with unannounced drills and post-crisis critiques of actual behavioral emergencies by risk-management personnel a vital part of emergency response preparedness. Practice sessions were available to all work groups, clinical units, and services. Framework of Skill Behaviors

It is important that skills required for competency be based on a system or framework (not selected at random). Manley and Garbett (2000) recommended a concept map, which, "in the McBer sense...highlights key interdependent attributes reflecting expertise in practice, but also identifies enabling factors reflecting key characteristics, skills, and values" (p. 355). There are unlimited opinions on the types of behaviors and skills. Morton (2002) proposed, at

minimum, drills, competency review sessions, and staff debriefings of actual incidents, while Taylor (2000) was a proponent of the TEAM concept, in which each nurse maintains a yearly competency portfolio comprised of technical skills, expertise and knowledge, ability to interact, and mission/commitment components. More than just a nicety, a competency framework is a JCAHO requirement. JCAHO's intent is often misinterpreted, according to LaDuke (2001), who maintains that misunderstandings have contributed to a "deluge of checklists."

Consequences

Trust

A nurse who has achieved competency creates trust in her employer, her patients, and in the public. Ludwick (1999) cautioned that although society as a whole has placed its trust in nurses, keeping this trust requires accountability (both individual and collective). Hinton (2003) also listed trust as a key trait, along with competency, among nurses in magnet hospitals.

Success/Achievement

Ramritu and Barnard (2001) identified eight characteristics of the competent nurse—one who is a safe practitioner, maintains limited independence, utilizes resources, manages time and workload, practices ethically, performs clinical skills, is knowledgeable, and continues to evolve professionally. These characteristics are common predictors of success. A nurse who maintains competency may also be a leader, which engenders a whole other series of competencies. "The benefits of using defined competencies in designing leadership programs include the integrated and sustained development of leadership capacity and the use of technology for increased access to and quality control of these programs" (Wright et al., 2000, p. 1205).

Job Effectiveness

The nurse who meets competency expectations is an effective employee, which is a necessity. Parsons and Capka (1997) described the ability to perform in real-world situations as "essential." And certainly, job effectiveness is an indispensable aspect of good patient care.

Practice Development

It is possible for a nurse who has achieved competency in a given area to "burn out" in one clinical practice area, even as she develops expertise. Dolan (2003) found this to be the case during a study of the use of standardized competencies in a group of students: "...students still felt that clinical placement was dominated by the achievement of individual competencies, which inhibited them from gaining an holistic experience of care" (p. 140). It takes a truly mature practitioner to develop a growing clinical practice upon a solid foundation of competency.

Construction of a Model Case

The Case

Like many nurses before her, Beverly (not her real name) began her nursing career as a staff nurse on the medical-surgical nursing unit in a medium-sized military hospital. Unlike many of her peers, she was self-disciplined and dedicated to achieving high goals, and she loved nursing and the people with whom she worked. Beverly earned certification as an obstetrics and gynecology (OB-GYN) nurse practitioner. For a number of years she worked in this capacity, tactfully and sensitively handling patients experiencing the gamut of emotions. She shared the happiness of a delivering a new arrival with a tearfully joyous couple, and she shared the grief of a baby lost with a tearfully frightened couple, and she handled both circumstances with composure and grace.

As time went by Beverly recognized that if she wanted to continue to progress up through the ranks she needed to branch out and broaden her scope, so she asked her chief nurse executive (CNE) for a management position, in which she would be able to supervise other nurses. The CNE, recognizing Beverly's potential, agreed to consider her when an opening was available. A few months later, Beverly accepted the position of flight commander (a senior nursing manager) for the hospital's inpatient services. She supervised two nurse managers, 35 baccalaureate-prepared nurses, and 60 enlisted medical technicians in the ICU and the multi-service unit (MSU—the adult medical/surgical and pediatric unit). She recognized the need to maintain her OB-GYN competency, so she took call and delivered babies on the weekends.

After 2 more years, Beverly knew it was again time to increase her level of responsibility, so she began serving as the deputy commander of the squadron, which meant more long hours and extra call duty. She also studied and earned her certification in nursing administration. Six months later her desire to maintain and advance her level of professional competency was rewarded when she received an assignment to another hospital—as a CNE.

Discussion of Model Case in Relation to Critical Attributes

Beverly served as a model case because she meets the intent of all of the critical attributes as identified in this analysis. She possessed a solid ethical framework upon which she built a career and was willing to give up some of her own freedoms to meet the physical, emotional, and leadership needs of those over whom she exercised responsibility. She recognized her own limitations, utilizing self-reflection, in the way she drew upon expertise of those around her rather than plunging into every project—in this manner the managerial staff of the inpatient ward grew stronger and produced more efficient work, by sharing areas of aptitude. Beverly had the knowledge needed for a variety of jobs and took steps to increase her knowledge as needed; thus,

she was prepared when the CNE position opened. Beverly became a resource for many hospital-wide issues that required judgment and decision-making. Even after spending less time in the clinical area, she was still in demand as an OB-GYN provider. Beverly's competency was validated not only by the recognition and promotions she received from leaders but also in the way her subordinates and peers gravitated toward her as one who could provide good counsel.

Construction of Related Cases

Borderline Case

Ed (not his real name) arrived to work on a 21-bed MSU. Ed had served several years in the U.S. Army and then had separated from the military in order to attend nursing school. He worked as a staff nurse for a period of time at a community hospital before taking on the position of shift supervisor at a nursing home, where he was out of the acute clinical setting for several years. Tired of the nursing home environment and hoping for improved benefits, he opted to return to the military, joined the active duty U.S. Air Force, and was sent to the MSU for his first assignment. Ed had a congenial personality, and he displayed enthusiasm and optimism for his return to the acute-care setting. He passed medication calculation and other cognitive tests with flying colors, then started his unit-specific orientation.

Problems began to appear after the first couple of weeks, during which he had largely shadowed his preceptor, Ellen, on the night shift. During Ed's third week, Ellen approached the unit's staff development officer (SDO) with concerns. Ed listened carefully and took notes during change of shift report, but he was having difficulty transferring his knowledge of what should be done during the shift to what actually got accomplished. He was having trouble prioritizing and often forgot patient requests (such as pain medication), put to him at the bedside, by the time he got back to the nurses' station. When technicians notified him about patients

whose vital signs were outside of parameters (such as abnormally high or low blood pressure), he noted the facts but did not notify the physician. He struggled with medication administration, spending inordinately long periods of time drawing up a dose of insulin, and seemed to fixate on simple tasks even when there were other urgent patient obligations that needed attention.

The MSU nurse manager (Ed's supervisor) and SDO met with him on several occasions over the next few weeks, trying to ascertain where his difficulties lay. He told them he felt he had had trouble at first but really felt he was "getting the hang of it" and appeared confident. They extended his orientation by two weeks to give him more time to get acclimated, and for several shifts they did not hear of any issues. However, when the SDO approached Ellen about Ed's progress and to ask whether they could end his orientation, Ellen told her that problems were ongoing. The SDO gave Ed a series of critical thinking exercises (based on patient scenarios) to complete, and he returned them promptly with adequate, if not scintillating, answers. His problem seemed to lie somewhere between what he knew in his head was competent practice and his ability to carry it out. Months after arriving on the MSU, Ed was facing yet another extension of his orientation.

Discussion of Borderline-Case in Relation to Critical Attributes

Ed's ethical standards seemed respectable, but it is possible that he failed to really recognize his own limitations (self-reflection). He seemed to have the knowledge needed for the job, at least when it came to problem-solving on paper, but his professional judgment and decision-making in the actual clinical setting appeared to be hindered. He could perform isolated skills when needed, but it was impossible to validate his overall practice based on his performance. As a result, he cannot be said to possess competency; and his inability to focus and perform basic skills under pressure may even have rendered him incompetent.

Contrary Case

Amy faced a competency challenge from the outset. She was a novice nurse, straight out of an extended orientation program at a small military hospital. During the 10-week program she had met and fallen in love with one of the ward nurses, and only a few days before she was to graduate from the program and move on to her permanent assignment she married him. This placed the management in an awkward position, as policy restricted married nurses from working in the same unit. Amy wanted to stay at her training hospital, but since it only had one ward, there were few alternate places that could accommodate a brand new nurse with minimal experience. The chief nurse executive made a command decision and assigned her to the emergency room (ER), which was perpetually short-manned, and Amy began her orientation about 10 days later. It was a trial from day one. Though a good learner, Amy was not assertive; she hesitated to ask questions when she was unsure and sometimes acted even when she was unsure (failed to recognize her own limitations). This led to several medication errors when she was acting under pressure. The ER competency list was exhaustive, covering everything from drug overdose (common) to emergency childbirth (not in the last several years), and Amy was slow to complete the orientation. At the time, the ER was staffed with only enough nurses to schedule one nurse per shift, and though Amy attempted to cope working alone, she was back on orientation within a couple of weeks.

After four more weeks with a preceptor, Amy was back on her own. At about 3:00 a.m. one stormy Sunday night, the ER received notice from a civilian ambulance that they were en route to Amy's facility with a cardiac patient from a rehabilitation center who had originally been destined for a downtown medical center but whose condition had begun to deteriorate rapidly. They needed to stop and emergently stabilize the patient. Amy tried to maintain

outward calm but she was inwardly panicking, since she had only witnessed a couple of "code blues" during orientation. Even then her preceptor had done much of the work. She was slow with drip calculations and was afraid of what she was going to be called on to do.

When the patient was wheeled through the ambulance doors, Amy realized that it was worse than she had feared. The patient's lines were tangled, and the infusion pump was unfamiliar. The physician began issuing orders, and Amy's head was swimming with drug calculations—Dopamine and Dobutamine, micrograms and kilograms, and how many milligrams were there per milliliter? She tried to concentrate on one calculation, but the physician was asking why the medications weren't hung yet, and she couldn't concentrate. Finally she snatched up the bottle and tubing and rushed to the bedside, hung it on the infusion pump and tried to program the pump. She connected the tubing to a port on one of the patient's lines and started the infusion. After a half hour and several upward titrations of the infusion, the patient's condition was not improving; the doctor was frustrated. It was during a pause, while the ER physician was consulting an internist on the phone, that Amy took a moment to attempt to disentangle the patient's lines, and she realized with a sinking feeling that instead of giving the infusion through an intravenous line she had unwittingly connected it to the patient's feeding tube, which had similar ports. In tears, Amy told the physician what she had done.

Discussion of Contrary Case in Relation to Critical Attributes

Is Amy incompetent? Unlikely, due to the chaotic circumstances under which the mistake occurred. However, she definitely lacked the competency necessary to function effectively in this type of environment. Vital antecedents were lacking. There was a skills framework to follow, but her experience, knowledge, and level of preparation were too basic for the position. Regarding the critical attributes, she was aware of her limitations (ethics/self-

reflection) but improperly prepared to deal with them under emergent circumstances—she was poorly educated in her resources and thus made an unwise decision in attempting to manage the complex nursing care on her own. Her nursing judgment was poorly developed; there were ICU nurses upstairs she could have called for assistance. Her skill performance under pressure based on the required framework had not been adequately validated.

Empiric Referents

Tool from Literature

Even though Dolan (2003) believes "...a comprehensive and effective measure of clinical competency has not been established" (p. 134) and that there are common problems with assessment of clinical competency (no matter which tool is used), tools are available that permit competency assessment in a variety of employment settings (and others that may be adapted to settings for which no specific tool yet exists). For example Blevins (2001) described the Dreyfus Skill Acquisition Model, which was applied by Benner and which evaluates competency using nine different domains. The Slater Nursing Competencies Scale (Wandelt & Slater Stewart, 1975) is provided as an example of an empirical tool for this analysis.

-Slater Nursing Competencies Rating Scale

The Slater Scale is based on the premise that "The yardstick or standard against which observed nursing care actions will be measured to determine the score for individual observations is the 'quality of care (performance) expected of a first-level staff nurse" (Wandelt & Slater Stewart, 1975, p. 35). Their written definition of this "first-level" nurse in the text is only vaguely comparable to Benner's (2001) five stages, because they identify this type of nurse only as one who is "charged with responsibility for providing nursing care that is safe, adequate, therapeutic, and supportive in meeting the needs of patients...one who...is prepared for these

responsibilities by one of the programs of nursing education that prepare individuals for state licensure as registered nurses" (p. 50). Use of the scale requires the rater to consider nurses he/she knows or has known in the past and to rank them mentally on a scale (Table 1). For example, the rater's selection for the category *Best Staff Nurse* would represent the nurse she would most like to take care of her should she be a patient.

Table 1 Slater Individual Frame of Reference Form

Best Staff Nurse		Between			Average Staff Nurse			Between			Poorest Staff Nurse		
0		+	0		+	0		+	0		+	0	
Best		Average									Poorest		

(Wandelt & Slater Stewart, p. 36)

Once the frame of reference is decided, the nurse rater compares the nurse being rated to the representative nurses on each of 84 simple competencies, divided into six categories. These are Psychosocial: Individual, Psychosocial: Group, Physical, General, Communication, and Professional Implications (Wandelt & Slater Stewart, 1975, pp. 3-8). A cue sheet provides examples of observable behaviors that meet the intent of each competency. The rating may be concurrent or retrospective—the nurse rater may use direct one-to-one observation (concurrent) or use anecdotal notes in order to recall behaviors demonstrated by the nurse being rated (retrospective). The authors suggest using more than one period of observation to complete the whole scale, as it is unlikely all behaviors would be demonstrated during one episode. They urge users not be too quick to check *not applicable*, pointing out that some Psychosocial: Group competencies, seemingly applicable primarily to the psychiatric nursing arena, may be applied in other settings as well.

Relevance to Stated Purpose

This tool addresses many aspects of practice and adheres to the evaluation of competency, rather than entering the competency vs. competence debate. Wandelt and Slater Stewart (1975) also provided statistical support for the tool, including tests of inter-rater reliability, internal consistency, stability, and construct, content, and predictive validity. The authors addressed the nurse's personal qualities in a way that made them applicable to a variety of clinical settings and, while not all-encompassing, the tool paints a very thorough picture of the nurse's level of character and competency. Some wording is a little muddy, such as item 84 (Accepts authority situations with understanding), which implies a blind acceptance of authority, but the cue sheet clarifies the authors' intent—the permissibility of a nurse to refuse a physician's order that contradicts hospital policy, and the statement that the nurse should accept with equanimity that sometimes her desire for two consecutive holidays may be at odds with hospital policy. These statements are examples of how the tool addresses the nurse's character, not simply her performance.

Relationship to Critical Attributes

Many of the antecedents and critical attributes of competency are implied by the scale rather than overtly stated. In terms of antecedents, items such as number 32, which states that the nurse is able to adapt nursing procedures to meet the needs of individual patients, and item 53, in which the nurse adapts nursing care to the patient's level of development, require the nurse to operate under an educated, orderly skills framework. Based on her experience and knowledge she is able to assess the patient, strategize, and then modify the plan of care in order to meet the patient's priority needs. Item 40, which states the nurse adjusts expectations of patient behavior

based on medication effects, implies that the nurse is able to evaluate the effectiveness of the interventions in accordance with the nursing process.

In relation to the critical attributes of ethics, self-reflection, decision-making, judgment, and validation, the tool again addresses all of these areas, some more overtly than others.

Regarding self-reflection, item 79 states the nurse avails herself of opportunities for learning, implying that the nurse recognizes opportunities to grow and develop professionally, and item 68 defines the nurse's level of self-direction and initiative. Items 80 and 81 identify the nurse as a good follower and a good leader, respectively—challenges that are difficult to meet without a solid ethical framework in place. Item 70 ascertains that the nurse exercises good factual knowledge and judgment—and item 69 that she makes decisions willingly and appropriately. Item 60 requires her to respond appropriately to emergency situations. Regarding validation and other professional implications, the nurse's score on items 74, 77, 78, and 83 give testimony to her compliance with the hospital's requirements for orientation and continuing education—and that she is reliable in following through with responsibilities.

Summary/Conclusion

This analysis has not established a directive for defining competency and distinguishing it from competence and its multitude of other synonyms. Authors and researchers in every profession will continue to use the terms interchangeably. It has, however, demonstrated that the term *competency* does have a clear distinction from its synonyms. Competency transcends just the assumption that the individual is fit for the task; it implies that the individual is not only fit by means of being trained, but is also motivated, is operating less in line with a paper checklist than with an inner framework, and is willing to actively pursue ongoing learning opportunities in order to stay on top of the task or role.

Returning to the scenario in the introduction—the case of ICU nurses' ability to maintain low-volume, high-risk abilities such as those involved in invasive hemodynamic monitoring—it may be argued that their competency can be objectively assessed. The nurses may be competent clinicians, but it is a challenge for them to perform the skill to the expected level of competency. While they may have a solid ethical framework and a knowledge base for this procedure, the absence of a real-world environment in which to gain experience, practice nursing judgment, and develop problem-solving and critical thinking skills clearly violates critical attributes. The nurses' competency on this particular skill cannot be adequately validated using only simulation. This offers evidence that competency is a process that must be continuously nurtured. It is to the hospital administrators' advantage that they weigh competency considerations judiciously when making decisions about which services can be safely offered.

The nurse functioning with competency possesses a range of character qualities that add depths of professionalism to mere competence. She is a magnet to other nurses who are seeking a mentor and role model, from the simplest assignment to the most complex responsibility.

While competency is a challenge to maintain, it is a vital asset to any nursing environment.

References

- Alspach, J.G. (1995). The Educational Process in Nursing Staff Development. St. Louis: Mosby.
- American Nurses Association Code of Ethics with Interpretive Statements (2004). Retrieved July 14, 2004, from http://www.nursingworld.org/ethics/code/ethicscode150.htm.
- American Nurses Association Executive Summary (1998). Looking for quality patient outcomes: The American nurses credentialing center's magnet program recognizes excellence. *Nursing Trends & Issues*, 3(4), April 1998. Retrieved July 22, 2004, from http://www.nursingworld.org/readroom/nti/9804nti.htm.
- Anderson, B., Fortson, B.W., IV, Kleinedler, S.R., & Schonthal, H. (Eds.). (2001). *The American Heritage Dictionary* (4th ed.). New York: Bantam Dell.
- Astarita, T., Materna, G., and Blevins, C. (1998). *Competency in Home Care*. Gaithersberg, MD: Aspen Publishers.
- Benner, P. (2001). From novice to expert: Excellence and power in clinical practice (Commemorative ed.). New Jersey: Prentice Hall.
- Blevins, C. (2001). There really is a difference: Home care competencies. *The Journal of Continuing Education in Nursing*, 32, 114-117.
- Bradley, D. & Huseman, S. (2003). Validating competency at the bedside. *Journal for Nurses* in Staff Development, 19, 165-173.
- Bradshaw, A. (2000). Competence and British nursing: A view from history. *Journal of Clinical Nursing*, 9, 321-329.
- Bradshaw, A. (1997). Defining 'competency' in nursing (part I): A policy review. *Journal of Clinical Nursing*, 6, 347-354.

- Bradshaw, A. (1998). Defining 'competency' in nursing (part II): An analytical review. *Journal of Clinical Nursing*, 7(2), 103-111.
- Brunt, B. (2002). Identifying performance criteria for staff development competencies. *Journal* for Nurses in Staff Development, 18, 314-321.
- Burke, A. (2000). How to accomplish organization-wide competency and education. *Nursing Management*, 31(2), 20-26.
- Coxwell, G. & Gillerman, H. (Eds.), (2000). Educational competencies for graduates of associate degree nursing programs. Sudbury, MA: Jones and Bartlett.
- Coyle-Rogers, P. (2003). Using adaptive competency acquisition assessment for licensed practical nurse career mobility. *Journal for Nurses in Staff Development*, 19, 34-39.
- DeOnna, J. (2002). DACUM: A versatile competency-based framework for staff development.

 *Journal for Nurses in Staff Development, 18, 5-11.
- DeSilets, L.D. (1998). Accreditation of continuing education: The critical elements. *The Journal of Continuing Education in Nursing*, 29, 204-10.
- Dolan, G. (2003). Assessing student nurse clinical competency: Will we ever get it right?

 Journal of Clinical Nursing, 12(1), 132-141.
- Dugger, B. (1997). Intravenous nursing competency: Why is it important? *Journal of IV Nursing*, 20, 287-297.
- Dunn, S., Lawson, D., Robertson, S., Underwood, M., Clark, R., & Valentine, T., et al. (2000).

 The development of competency standards for specialist critical care nurses. *Journal of Advanced Nursing*, 31, 339-346.
- Eichelberger, L.W. & Hewlett, P.O. (1999). Competency model 101: The process of developing core competencies. *Nursing & Health Care Perspectives*, 20, 204-208.

- Exstrom, S.M. (2001). The state board of nursing and its role in continued competency. *The Journal of Continuing Education in Nursing*, 32, 118-125.
- Forker, J.E. (1996). Assessing competency for community-focused nursing practice. *Nurse Educator*, 21(3), 6-7.
- Haddad, A. (1998). Ethics in action: What would you do? RN, 61(9), 21-2.
- Harper, J. (2002). Preceptors' perceptions of a competency-based orientation. *Journal for Nurses in Staff Development*, 18, 198-202.
- Hewlett, P. (2000). Minutes of Office of Nursing Workforce Regulation (OWNR)

 Education/Service Liaison Committee, February 18, 2000. Retrieved July 20, 2004, from http://www.healthsci.clayton.edu/competency/minutesfeb2.doc.
- Hinton, L. (2003). A look at the recent IOM report with Ada Sue Hinshaw. *Nursing Spectrum, December 1, 2003*. Retrieved July 22, 2004, from http://community.nursingspectrum.com/MagazineArticles/article.cfm?AID=11154
- Hyperdictionary (n.d.). Competency: Dictionary entry and meaning. Retrieved July 20, 2004, from http://www.hyperdictionary.com/dictionary/competency.
- Institutes of Medicine. Kohn, L., Corrigan, J., & Donaldson, M., Eds. (1999). To err is human:

 Building a safer health system. Washington, D.C.: National Academy Press. Retrieved

 July 20, 2004, from http://www.nap.edu/html/to_err_is_human/.
- Jenkins, J. (2002). Genetics competency: New directions for nursing. AACN Clinical Issues:

 Advanced practice in acute and critical care, 13, 486-491.
- Joint Commission on Accreditation of Health Care Organizations (2000). Comprehensive accreditation manual for hospitals, update 4. Oakbrook Terrace, IL: Author.

- Jones, T., Cason, C.L., & Mancini, M.E. (2002). Evaluating nurse competency: Evidence of validity for a skills recredentialing program. *Journal of Professional Nursing*, 18(1), 22-28.
- LaDuke, S.D. (2001). The role of staff development in assuring competence. *Journal for Nurses* in Staff Development, 17, 221-225.
- 'Lectric Law Library (n.d.). Competency defined. Retrieved July 20, 2004, from http://www.lectlaw.com/def/c078.htm.
- Lenburg, C.B. (1999). The framework, concepts, and methods of the competency outcomes and performance (COPA) model. *Online Journal of Issues in Nursing, Sep 30, 1999*.

 Retrieved June 8, 2004, from http://nursingworld.org/ojin/topic10/tpc10 2.htm.
- Leonard, B.J. & Plotnikoff, G.A. (2000). Awareness: The heart of cultural competence. AACN Clinical Issues: Advanced Practice in Acute and Critical Care, 11(1), 51-59.
- Ludwick, R. (1999). Ethical thoughtfulness and nursing competency. *Online Journal of Issues*in Nursing, Sep 30, 1999. Retrieved June 8, 2004, from

 http://nursingworld.org/ojin/ethicol/ethics_2.htm.
- Manley, K. & Garbett, R. (2000). Paying Peter and Paul: Reconciling concepts of expertise with competency for a clinical career structure. *Journal of Clinical Nursing*, 9, 347-359.
- Masson, L. & Fain, J. (1997). Competency validation for cross-training in surgical services. *AORN Journal*, 66, 651-659.
- McConnell, E.A. (2001). Competence vs. competency. Nursing Management, 32(5), 14.
- McGuire, C.A. and Weisenbeck, S.M. (2001). Revolution or evolution: Competency validation in Kentucky. *Nursing Administration Quarterly*, 25(2), 31-37.

- McMullan, M., Endacott, R., Gray, M.A., Jasper, M., Miller, C.M.L., & Scholes, J., et al. (2003).

 Portfolios and assessment of competence: A review of the literature. *Journal of Advanced Nursing*, 41, 283-294.
- Morton, P.G. (2002). An evolution in interdisciplinary competencies to prevent and manage patient violence. *Journal for Nurses in Staff Development*, 18, 41-47.
- Mustard, L. (2002). Caring and competency. *JONA's Healthcare Law, Ethics, and Regulation,* 4(2), 36-43.
- Parsons, E.C. & Capka, M.B. (1997). Building a successful risk-based competency assessment model. *AORN Journal*, 66, 1065-1071.
- Pettno, P. (1998). A four-level clinical ladder. Nursing Management, 29(7), 52-53.
- Ramritu, P.L. & Barnard, A. (2001). New nurse graduates' understanding of competence. *International Nursing Review*, 48(1), 47-57.
- Redman, R.W., Lenburg, C.B., & Hinton Walker, P. (1999). Competency assessment: Methods for development and implementation in nursing education. *Online Journal of Issues in Nursing, Sep 30, 1999*. Retrieved June 8, 2004, from http://nursingworld.org/sjin/topie10/tpc10_3.htm.
- Rudzik, J. (1999). Establishing and maintaining competency. *Journal of Intravenous Nursing*, 22(2), 69-73.
- Rusche, J.D., Besuner, P., Partusch, S.K., & Berning, P.A. (2001). Competency program development across a merged healthcare network. *Journal for Nurses in Staff Development*, 17, 234-240.
- Stamatis, D.H. (1995). Failure mode effect analysis: FMEA from theory to execution.

 Milwaukee: ASQ Quality Press.

- State of California Board of Nursing, policy NPR-B-21 (1998). RN responsibility when floating to new patient care unit or assigned to new population. Retrieved June 25, 2004, from http://www.rn.ca.gov/policies/policies.htm.
- Tanner, C.A. (2001). Competency-based education: The new panacea? *Journal of Nursing Education*, 40, 387-388.
- Taylor, K. (2000). Tackling the issue of nurse competency. Nursing Management, 31(9), 34-38.
- Thompson, C.R. (2003). A delphi study to validate competencies required of Air Force medical surgical (46N3) nurses in mobilized environments. *Military Medicine*, 168, 618-625.
- Tornabeni, J. (2001). The competency game: My take on what it really takes to lead. *Nursing Administration Quarterly*, 25(4), 1-13.
- Walker, L.O. & Avant, K.C. (1995). Strategies for theory construction in nursing (3rd ed.). New Jersey: Prentice Hall.
- Wandelt, M.A. & Slater Stewart, D. (1975). *Slater nursing competencies scale*. New York: Appleton-Century-Crofts.
- Watkins, M.J. (2000). Competency for nursing practice. *Journal of Clinical Nursing*, 9, 338-346.
- Whittaker, S., Carson, W., & Smolenski, M.C. (2000). Assuring continued competence—policy questions and approaches: How should the profession respond? *Online Journal of Issues in Nursing, June 30, 2000*. Retrieved July 20, 2004, from http://www.nursingworld.org/ojin/topic10/tpc10_4.htm.
- Winchcombe, J. (2000). Competency standards in the context of infection control. *American Journal of Infection Control*, 28, 228-232.

Wright, K., Rowitz, L., Merkle, A., Reid, W.M., Robinson, G., & Herzog, B., et al. (2000).

Competency development in public health leadership. *American Journal of Public Health*, 90, 1202-1207.